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WHY TEACHING IS NOT A PROFESSION.

THE term profession, as applied to employments in general, has an indefinite meaning, and does not denote distinguished attainments in knowledge and art. Indeed, the word is seldom used in its general meaning; some other word, such as vocation, or, more commonly, occupation, being in vogue. The term has a special meaning, which denotes the practice of a vocation that requires, in a practitioner, a liberal education, and besides, a special education in the principles of a science and the rules of an art. It is significant that, through all generations among civilized men, the only vocations which have succeeded in getting recognition from the common sense of the people as being professions, are the three vocations of Theology, Medicine, and the Law. These are sometimes called "the learned professions," but only because of the use of the word in its general and indefinite sense. When the word is used in the special sense, the term "learned" is superfluous, since the word profession then implies learning.

The term implies the existence of a science, stated, developed, and tangible. It implies also a tangible art. It denotes that a course of study is laid out through which the candidate for practice may and must work his way by the unroyal road of brain exertion. It implies that the course of study is such as to elevate the student intellectually so as to warrant to him a dominant sphere in society, and the highest respect of men. And it indicates for the practitioner a sphere of action in which he may press ever on in view of yet unattained knowledge, and in sight of no bounds.

I do not assert that this might not be the condition of things in the sphere of teaching. If knowledge is boundless, and if the pupil-mind

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is boundless, the condition is the same. That knowledge is boundless, is popularly admitted. That the pupil-mind, ungrown though it be, offers a sphere of inquiry and application which the teacher can never exhaust, is clear only to the one who has been gifted with the faculty of psychological perception. Herein—in knowledge, in pupil-mind and in psychological perception—lie the resources for a stated science and art of teaching; and the plain fact is that no such science and art have been stated. In the sphere of teaching, we refer to schools, not to a science; to human authorities, not to the abstract truth. Workers in the mine have been multitudinous. Workers with eyes have been few, and they have wrought in a light that has been dubious. They have wrought far apart, and the treasures which they have dug up are scattered in widely separated heaps. No one in teaching, like Blackstone in Law, or Quain or Gray in Anatomy, has been gifted with power to put all these heaps together in shape and to add thereto; in other words, to crystallize the fragmentary knowledge into a systematic whole, and to develop the whole by independent thinking.

Hence it is that teaching, though long ambitious for rank as a profession, yet has never attained to the rank.



## THE RETENTIVE POWER OF THE MIND IN ITS BEARING ON EDUCATION.

### II.

LET us now shortly place these various maxims in another light, under which they may be still more suggestive, by reviewing in order the leading classes of our acquisitions. They may all be embraced under these six heads:—Mechanical, Lingual, Scientific, Artistic, Practical, and Moral.

1. Mechanical acquisitions are the various handicraft operations, military drill, active sports, and the power of manipulation generally—both in the inferior and in the higher vocations. The *natural* aptitudes for these relate (1) to the activity, or the active organs, and (2) to the delicacy of the sense concerned in the work—whether touch, sight, hearing, etc.; both being improvable. As regards the Activity, there must be a certain physical vigor of muscle, as well as those deeper endowments of the nerve-centres, shown by exuberance of movement and by flexibility, compass, and delicate graduation. As regards the Sense, all excellence is summed up in nicety of discrimination.

Now the obvious part of mechanical acquirements is an associating or linking process, for fusing separate movements into one complex act, or for joining them in a chain, one link suggesting the next. These aggregations and concatenations make a large part, but not the whole. Both as respects the organs and as respects the sense, we have to interpolate many new grades or positions, the fixing of which is a work of time, and absorbs a large amount of the available plasticity of the system. To be able to introduce three or four new gradations of energy in a blow with the arm, or to double the distinguishable shades of color or discriminations of musical pitch, we must maintain an incessant practice for months. All the general conditions of economy in acquisition apply to this case—vigor in the organs, alternations of repose, steady persistence, and the rest.

2. Much more complicity surrounds the lingual acquisitions which occupy a considerable part of every one's mind, whether cultivated or uncultivated. Language, like mechanical skill, is distributed between active organs and senses, there being, in the first instance, the voice and the ear; written language introducing the hand and the eye. Great aptitude for vocal utterance, or speech proper, is founded partly on the activity, flexibility, and graduated exertion of the muscles of the voice and of the mouth, and, for the largest part, upon the delicacy of the ear. A good general memory, or a retentive intellect on the whole, is also of great consequence in an acquirement so multitudinous in its details.

All the general conditions of economy in learning are in the highest degree available for language. Youthful vigor and disengagement of mind, steady application, absence of distracting lessons, and a certain interest on the part of the learner—are prime requisites. It is here, however, more than on any other subject, that mnemonic arts and ingenious devices have been sought for; the royal road being more desiderated even in language than in geometry. The attainment of some thousands of vocables, not to speak of their numerous groupings in phrases, clauses, and periods, is felt to be a heavy undertaking, and we are eager to embrace any promising alleviation.

The rules of thrift that we endeavored to base upon the ascertained laws of the constitution, bodily and mental, would indubitably lessen the toil of acquiring languages as well as of everything else. Still the effects must not be exaggerated. Between good ordinary teaching and the best ideal teaching the difference is not enough (in my judgment at least) to found proposals for either extending the number of languages in the existing curricula of the schools, or for retaining the present amount in conjunction with additional studies in science and in general knowledge. I should be willing to allow, say, twenty-five or thirty per cent. of possible saving between a fair average tuition and a maximum tuition; but

this would not enable three languages to be learnt in the time of two, nor would it make room, without other displacements, for one important science in the curriculum of a school or college.

Let us consider closely some of the contrivances for imbibing languages, as it were, by stealth. Much stress is deservedly laid upon the apparent ease of their attainment by children. To learn the speech of those about them seems to take no effort, to interfere with nothing, to be a pure gain. Now great suspicion attaches to all advantages that pretend to cost nothing; and as to mental acquisitions, we may be sure that the position, broadly stated, is untrue. It *may* be true that these childish attainments cost little, and do not stand in the way, to any material degree, of pleasures and other acquirements; although this limited assertion is not to be received without misgivings. At all events, it is the accredited practice to surround children with French and German nurses and governesses, to take them abroad early, and so to insinuate the vocables and the pronunciation of foreign languages *pari passu* with the mother tongue.

Let us attend for a moment to the experience of the nursery during this trilingual operation. Everybody who has taken a part in the initiating of a child into the mother-speech knows that it is not play, or the happy unconsciousness of effort. Many a hard and toilsome struggle is gone through with the first articulations, and very few of these are taken up without some pains. After the power of pronunciation and the imitative ear are developed, the vocables are picked up with tolerable rapidity; but no one can be fixed without a momentary engrossment of the attention. Every word detains the child's concentrated faculty for an appreciable time—is, in fact, a charge upon its limited (though pretty extensive) fund of mental power. Even when there is no apparent compulsion or crossing of the grain, the demand upon the mental concentration is still the same; the most willing exercise is not exempt from the physical conditions of the mind; while it is going on, power is used up, attention is withheld from other things; an item of expenditure is incurred.

But these instants of concentration must be multiplied for the polyglot child; the spare moments of attention to other matters left to the cottage infant must be still further abridged by the labors of the French nurse and the German governess. Now these spare moments are not necessarily tracts of pure waste, as is commonly assumed; many of them must be employed in laying up the store of sense-experience constituting the groundwork of knowledge, information, and tact in surrounding things. And although one must not make rash affirmations in a subject where everything turns on amount or degree, and where exact measurement is not attainable, yet we are safe in asserting that the absorption of mind involved in beginning three languages *may* considerably infringe upon



other valuable acquirements of infant life. At the very least, the possibility of such a thing must be allowed for, and the experience of the practice is not such as to dispose of the objection.

In the well-appointed nursery there are numerous resources of real economy, not based on the assumption that two extra languages can be built up at no expense but the cost of the tutors. It is here that the child might be saved from many acquirements that have afterward to be undone—bad pronunciations and idioms, wrong information, prejudices, and moral weaknesses that are a burden upon after-life. This vast economy was earnestly enforced by Quintilian in his scheme for the education of the public man of his time.

When it is said that by certain improved methods Latin, for example, may be taught in less than two years, instead of being protracted over seven, there is a very apparent ambiguity not sufficiently dwelt upon. The grammar and commoner vocables and the straightforward constructions of the language might be pretty well got up in two years, after the age of twelve or thereby, but it would only be for known and familiar subjects; the student of science or of law might read Latin treatises on those subjects, and the easier historians might probably be read. In former days when college lectures were given in Latin, the preparation for understanding these, or even for composing them, would not be a very serious thing. There was not much scholarship wanted to write the Latin of the "*Principia*." But, now-a-days, this special utility of the language has vanished except in a few isolated instances. The Latin required by the lawyer, the Latin and the Greek demanded in theology, might be got up as part of professional study, and need not enter into the curriculum of general study at all.

But classics mean something more than this, and that additional something is a vast extension of minute details, not to be compressed into a short time by any scheme whatever. After Newton was able to write the "*Principia*," he was probably still unable to read a book of Horace's Odes. If any one is to master Virgil, Horace, Livy, and Cicero, the supposed two years must at once be doubled under the most favorable circumstances. The minute knowledge necessary for comprehending these authors takes of itself years to build up; and if classical study is to be understood in this wider significance, I deem it wholly incompatible with the extensive introduction of modern studies into the curriculum of a liberal education.

3. The Sciences, as a whole, present the most serious difficulties to the great mass of learners, although they are not all equal in this respect. Those of the outer world, as contrasted with the Mind, range between the two extreme poles—the highly abstract, as Mathematics, and the concrete and experimental, as Natural History, Physiology, and Chemistry.

For the first, perhaps, the majority of persons are little suited; for the second, which appeal more to the senses, and give scope for active manipulation, the disqualification is far less extensive.

The feature that is at once the glory and the difficulty of science is *generality*. On account of this, resort is had to very abstract terms, and to uncouth symbols, which have all a representative character. No individual thing mentioned in science ever terminates in itself; if the teacher shows a lever, the pupil must not feast his eyes upon that, and so end the subject. Unless the mind can carry, with the lever seen, many other levers unseen, it has not obtained a scientific conception. This demand for comprehending the absent along with the present is a strain upon the faculties, and can never be of itself an alluring exercise. The arts of skilled tuition are nowhere so imperative as in dealing with these scientific elements. The primary requisites of acquirement—the freshness of the organs, the moderate length of lesson, the steady persistence, the restriction to one or two sciences at a time—are least of all to be dispensed with in nursing the feeble scientific capabilities of an average intellect.

If the stress of scientific education were more placed upon the concrete branches, as Natural History, Chemistry, Experimental Physics, the greater attractions, the more immediate applications to practice, and the smaller demand upon the power of abstract reasoning, would no doubt multiply the number of those that could “pass” in science. If we allow thirty per cent. for the minds wholly incapable of the peculiar scientific effort (some, perhaps, from great natural aptitudes of a conflicting kind, as Fine Art), of the remaining seventy, perhaps less than thirty would be at home in Mathematics, while all might do some good in one or other of the Concrete Sciences. The proportions of successes and failures, however, will fluctuate more widely, according to the teacher, than in the other branches of common education.

We will pass over the acquisitions in Business and in Fine Art, to advert to certain special laws of the Retentive Faculty in the department of Moral and Ethical Education. In its most comprehensive scope, this includes not merely the elements of social duty, or regard to others, but all those readjustments of the feelings, appetites, and volitions that promote the happiness of self. To associate the likings and the dislikings with proper objects expresses a large and vital region of human culture.

Into this great department there enter all the conditions and restrictions already stated with reference to acquisition generally. Moreover, as regards the limits of the plasticity of the body and mind, we have to remember that this element likewise costs a great deal, and cannot be pushed to all lengths; while it must needs be crippled by an excessive devotion to the building up of purely intellectual trains. A moral lesson

needs all the favoring circumstances of any other lesson ; it cannot be impressed under fatigue or great mental distraction, or when the mind is bent on some intellectual achievement. To cement a pleasurable association, to convert an outburst of tender feeling into a lasting affection, there must be time, opportunity, and the concentration of a fresh and vigorous state of mind. To conquer a misplaced antipathy, as the childish dread of insects, the demands for favoring conditions are, if possible, still more urgent.

The periods of life most adapted to moral education in the widest scope are, first, before the beginning of intellectual education, when habits of obedience and the early forms of affection are to be established ; secondly, during the intervals and remissions of engrossing intellectual tasks ; and, thirdly, after the severest parts of education are over, and before the difficulties and the greater labors of life commence, or else in the moments when these are happily relaxed. Many important habits of the moral kind are nurtured under the discipline of the school ; such are industry, regularity, patience in labor, and obedience to authority. What the school training cannot do is to build up the finer emotional associations that give the soft, warm radiance to the after-life.

The two conditions special to moral training are these—(1), a powerful initiative, and (2) the precaution of not exposing the subject to trials beyond the acquired strength. The importance of these is most conspicuously shown in the repression of the impetuous appetites and urgencies.

By a powerful initiative is meant some strong influence of authority, example, or personal resolution at the outset. Thus, to take the habit of persistent daily industry reared in opposition to indolence and desultory pursuits. In order to form this habit speedily, there must needs be a strong inducement to remain steadily at work throughout the appointed hours. Either the compulsion of a superior, or some ascendent motive in one's own mind, is essential in order to cope with the reluctance of the natural man to daily and continued drudgery. In the intellectual branches of education, the strong initiative is not necessary in the same degree. A person may, although not very successfully, acquire reading and writing by fits of application, governed by whim or caprice ; but it is the nature of the moral acquirements to conquer an inward opposition, and that opposition, prior to being conquered by habit, must be conquered by some other influence. This is what is meant by an adequate initiative.

In the next place, it is essential to the growth of a moral habit that the learner should not be exposed beyond the strength gained at the time. If it is desired to train a youth to temperance by the quickest road, the course is never to expose him to a temptation that would be too much

for him. Every failure in a combat throws the subject back several points. Sometimes, indeed, a failure is accompanied with a painful and deterring smart that may be a beacon for the future ; but this is not a thing to be trusted to, and in the mass of cases it does not hold. To cite an extreme instance : if we are endeavoring to inure a timid nature to confidence and to a certain amount of courage, we must on no account expose the subject beyond the acquired strength. A single fright will nullify the upbuilding labors of months. So, in moral habits generally, a temptation yielded to unwinds a portion of the work. We do not tempt the young child with sweets, nor trust a mere youth with uncounted money. However hard the condition may be to fulfil, the soundness of the principle is not to be disputed. It stands clearly out in bodily training, which must never go to the length of injuring the muscles, or weakening the functions of the heart. We do not make a moral character by the removal of all temptation ; that would be an error on the other side : it may be proper at the commencement, but is nugatory at the end. There is a time for being protected against the rough world of trial, and a time for graduated exposure. It is as in hardening the bodily system to bear cold and fatigue ; the learner should avoid catching an illness in the early stages : every such illness is a breach in the works—a weakness to be erased by a tedious course of inuring.

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## GRAMMATICAL NOTES.

### XV.—GRAMMAR A SCIENCE,—ITS PROVINCE.

SINCE we commenced the writing of these “Notes,” several months have elapsed. During this time, as had previously been the case, two questions have presented themselves to us again and again. The one is, Is Grammar an art or a science? the other, What is the true province of Grammar? A few words on these points might very appropriately have formed the first of this series of papers. But having plunged, after the manner of Epic poets rather than grammarians, *in medias res*, and having had our attention again called to these questions by certain recent grammatical publications, we propose to return *ad rerum primordia*, and briefly answer these questions as we think they should be answered.

A science is a system of principles regarded as more or less established concerning some particular subject ; as, the science of astronomy, of botany, of chemistry, of medicine, etc. An art is a skilful employment of previously acquired principles ; as, the art of music, of composition,

of oratory, of medicine, of husbandry, etc. Now while speaking correctly or speaking grammatically is properly an art, grammar, which is an embodiment or system of principles, is a science. It is the science upon which the art of speaking grammatically is based.

But to define it as "the science of language," as many do, is to give it a definition altogether too comprehensive. It is like saying that arithmetic is the science of mathematics, whereas it is only one department of that science. This definition, or the equivalent statement that it is the science that teaches the right use of words, or that which teaches the art of speaking and writing correctly, may have been well enough for the ancients, who included under the name of grammar all the departments of linguistic knowledge and art. But for us to define it thus, when it includes scarcely a tithe of what it once was made to embrace, is about as rational as it would be to continue Pliny's application of the term "Natural History" to agriculture, astronomy, commerce, ethnology, geography, history, medicine, physics, and the arts, as well as to natural history properly so called. His natural history was a sort of encyclopedia. So Grammar with the ancients, despite the etymology of the term, included criticism, rhetoric, logic, and all that pertained to the study and use of language, even to penmanship. But with us it has no such extended application. The true province of grammar now, is to treat of the principles that relate to what is called speaking or writing *grammatically*. There are numberless examples of improprieties, vulgarisms, provincialisms, bad rhetoric, yes, bad English, which, as Prof. Greene justly says,<sup>1</sup> "can never be reached by the rules of grammar; they must be corrected by the laws of good usage." In accordance with which, Marcel,<sup>2</sup> with a world of truthfulness, says, "Grammar assists so little in freeing the expression of thought from inaccuracy, obscurity, and nonsense, that a composition may be strictly grammatical, and withal replete with incongruities of all sorts,—bad spelling, inappropriate terms, inelegancies, alliterations, pleonasm, barbarisms, awkward constructions, unsuitable figures, illogical deductions. This truth is forcibly illustrated by those who, in learning a foreign language, have attended to grammatical principles and exercises more than to good models; they often express themselves most incorrectly and ludicrously in that language, although they may not violate a single rule of grammar." In illustration of this point, take the following from Marsh's *Lectures on the English Language*.<sup>3</sup> "*Commence* is used by good writers only as a transitive verb, and as such requires the participle or participial noun, not the infinitive, after it. The phrase '*I commence to build*,' now occasionally employed,

<sup>1</sup> S. S. Greene, *El. Eng. Gram.* p. 34, note.

<sup>2</sup> P. 183, note.

<sup>3</sup> *On Language*, Vol. I., p. 400.

[instead of *commenced building* or *began to build*,] is therefore not sanctioned by respectable usage. At the same time, there is no valid *grammatical* objection to its use." The same may be said of numberless other phrases and expressions. "I *disremember* what he said." As Greene says, "What rule of grammar will correct such an expression? Cannot every word be parsed?" "I shed a *power* of tears." What violation of grammatical principles is involved here? This is simply inelegant English, though it is the exact counterpart of the Latin "*Vim lachrymarum profudi*,"—an example of the purest classical Latinity. English idiom or good English usage thus condemns thousands of expressions, the impropriety of which cannot be reached by grammatical corrections.

What then is the province of grammar? To answer this we need but to ask what we mean by speaking or writing *grammatically*. When we say of a person that his language is grammatical, do we refer to his orthography? Not at all. If we merely hear him speak, we can hardly form any judgment of his spelling. Or, if his language is committed to writing, it may present gross violations of the rules of spelling, and yet be strictly grammatical. If his spelling and the structure of his sentences are both bad, we say his orthography *and* grammar are defective. We thus make orthography something distinct from grammar. The same may be said of orthoepy and prosody. If a man's pronunciation is unexceptionable, no one ever thinks of saying on that account that his language is grammatically correct. And if his punctuation, or his versification (in case he is a poet,) is good, he is not therefore spoken of or considered as a good grammarian. The reason is obvious: neither punctuation nor versification belongs to what we consider grammar. It is true, grammarians generally teach that orthography and prosody, and sometimes orthoepy, are among the subdivisions of the science of grammar. But the manner in which they slight these subjects clearly indicates that they make these divisions rather from a deference to custom than from a conviction that they are proper and necessary. They remind us of the preacher who is said to have divided his subject thus: "1. The world; 2. The flesh; 3. The devil;" and to have added, "We will not dwell on the world; will touch but lightly on the flesh; and hasten on to deal mainly with the devil."

Ben Jonson, one of the earliest writers on this subject, confines grammar to Etymology, which, he tells us, "is the true notation of words; and Syntax, which is the right ordering of them." This division is in accordance with the present universally conceded notion of the nature and province of grammar. For, as one of the acutest and most thoughtful of writers on the study of language, Marcel, says, grammar "is now confined to Accidence, which treats of the nature and inflections of words, and to Syntax, which furnishes rules for their arrangement and

concord." Mulligan, in like manner, in his able "Exposition of the Grammatical Structure of the English Language," limits himself to "the classification of words, the modifications or changes of form which words undergo in order to express a modified meaning, and the laws or principles which regulate the combination of words for the purpose of expressing thought." If his design had also embraced the *orthographical* and *rhythmical* structure of the language, he would necessarily have treated of the principles of orthography and prosody. But, in so doing, he would have stepped aside from his professed object, and given us something more than a treatise on the *grammatical* structure of the language. It is no part of the province of grammar as such to treat of the pronunciation of words, either singly in their elements or as they stand connected together in sentences; or of the spelling, the meaning, the origin, or the composition of individual words; or of the rhythm, the force, or the flow of words in sentences and paragraphs. Its business is simply to deal with words as related elements (either really or possibly) of speech or discourse; its aim being to teach correctness in the combination of words as a medium of expressing thought, whether expressed orally or in writing.



#### NEEDED REFORM IN BABYDOM.

THE most important part of any edifice is its foundation. Cottage or palace cannot hope to endure if that be imperfect. This rule obtains in intellectual as well as material institutions. Our system of education may be said to be as near perfection as Art can render it; still, the large sales of yellow-covered literature compel us to admit that the imaginative faculty in our youth, though much distorted, is not yet wholly obliterated. We can effectually dispose of natural elocution in children, and by studied neglect snub the desire for imitation, but the robber *Fancy* too often eludes us. It is submitted that this defect must be sought for in the foundation of our educational superstructure.

The condition of the youth of our cities, and the alarming increase of their immoralities and crimes, are subjects worthy of attention. To what causes, or rather to what parties, are they to be attributed? Question the magistrate, he replies: I am not answerable for the crimes; my duties are performed when I sentence the criminals. Summon the school teacher, he answers: Am I not daily supervised, educationally and politically, by officers composing or appointed by Boards of your own choosing? Besides, you have given my physical authority to the magistrate and my moral power to the clergyman. Arraign the latter, and he will



reply: The reprobates would not attend church and Sunday School, therefore I am blameless. These parties being all guiltless, it is evident that the fathers, and more especially the mothers, are the real malefactors, and that the evils we deplore are the results of bad early training, and faulty home education.

It is an important question, and germane to the matter, whether parents, especially mothers, ought any longer to be permitted to control their infants. Warped as she is by her affection, the mother is manifestly the most unfitting person in the world to rear her offspring. The innovation, now happily extending amongst our wealthier people, of varying the maternity of infants by handing them over to wet-nurses from their birth, is a step in the right direction; but it is hardly sufficient to insure for us the full benefits we ought to obtain from such noble acts of disinterestedness. For, it must be confessed, that the conduct of the parties to whom such charges are transmitted (who commonly grow to be too fond of the children they sustain) is often very pernicious, whilst, at the same time, the inanities they generally inculcate, are not only ridiculous but ineradicable.

A great advance has also been made, latterly, by organizing a system of relays of nurses for the little ones. This has a wholesome indurating effect upon the minds of the children. This method of training is afterward well carried out in our larger public schools. Youths, so nurtured, are in after-life rarely injured by the excesses of their affections.

It is as difficult to overrate the importance of very early education, as it is to fix the precise period when education commences. Reader, have you ever beheld a young mother instructing her firstborn? How rapidly the lessons are given by the one, and how quickly they are coned and recited by the other! Such sessions almost always commence with an essay on attention, and terminate with one on love. The lessons are not spoken but performed. The changing features of the parent are reflected in the babe. Surrounding objects are frequently pressed into the service—a gaudy butterfly, a sparkling brooch, the countenance of a friend, or anything which will attract attention, is unsparingly made use of. But although surprise, fear, anger, sorrow and hope, fill each their separate portions of the exhibition, the performance usually terminates in a perfect *feu-de-joie*,—no, this is too warlike—a nest of kisses.

But, a reflecting mind can easily perceive that this is no proper method by which to induct a child into the tough business of life. A mental epidermis, so tenderly nurtured, will be scratched into ribbons in passing through the thorny paths of human existence. Are not parents really guilty of cruelty who encourage (or perform in) such exhibitions? How much better babyhood would be reared if placed under the charge of a competent board of instructors!

Again, the whole of the present literature of babydom sadly needs revision. What can be more absurd than the imaginative monstrosities which fill our nursery-books? Yet, not uncommonly, these drivellings hum in our ears through life, and, in our extreme old age, ring us into eternity. How much better would it be to supplant them with statements proper to be acquired, which would be both consistent and real. Instead of The Cow Jumped over the Moon, let the child jump over the Multiplication Table, so that it may earlier get acquainted with the mysteries of Arithmetic.

How easy also would it be to provide practical substitutes for the nonsense at present obtaining—to replace the absurd and unintelligible

"Froggy would a wooing go,  
Whether his mother would let him or no,  
Heigh! Ho! Gammon!"

with a sober truth like the following, which, if necessary, might also be made to jingle—

"A dollar, loaned at six per cent.,  
Will yield six cents to pay the rent;  
Per Annum!"

Or, for a baby, with a mathematical turn of mind, this might be used;

"Every triangle you view  
Has in it right angles too;  
Quod erat demonstrandum."

The latter line doesn't rhyme, but it might lead to useful inquiries, and on that account is added. But some children are practical, that is, until they are stretched in the bed of Procrustes. A leaf from the modern Palmerian philosophy might suit such; therefore the following couplet is respectfully submitted:

"If you should marry a scolding wife,  
You'd better, my lad, insure her life."

It is evident that these could easily be multiplied *ad infinitum*. The world is sadly in want of a new Series of Books on such subjects, and it is high time the attention of the learned was turned to such improvement of our earliest literature.

Since the above was written, a correspondent of the *Revolution* proposes what he calls "Free education, beginning with the nursery, and taking charge of the children during working hours"—that is, with work-women, all the time. He claims this as an educational and an economical gain. Doubtless it would be one. Men of science could soon invent a medicated water of superior nutritive powers, and far cheaper than the solution known by the name of milk in this city. And by substituting peb-

ble-stones for pap, a similar reform might be effected in the food. The latter would also assist the children in teething. True, that is only a present inconvenience, which will soon be dispensed with, for the influx of dentists is so great, that we may rest assured that they will soon claim the right to furnish both editions of the teeth of humanity.

It is easy to change nature's diamonds into carbon, but where is the alchymist who can re-convert that carbon into diamonds?

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### TEACHING SPELLING.

THE great object of learning to spell is to be able to spell correctly in writing. Occasionally a person is called upon to spell a word for another, and among the thousands who go to school, here and there one, in after-years, engages in teaching—spelling, perhaps, as well as other things. But the great mass learn to spell with a view to writing orthographically. To make instruction in orthography, therefore, a practical thing, spelling should undoubtedly be taught through the point of the pen or pencil. This, we believe, has now become a very general mode with small classes. With classes numbering from four to twelve it does very well to dictate to them short sentences for five or ten minutes, according to the degree of their advancement, requiring them to capitalize, punctuate, put in hyphens, apostrophes, etc., as well as “spell” their words correctly. Then let them exchange slates or papers, and correct each other's work, without any communication between them. This will consume about ten minutes more. Let the teacher then examine the entire work, if not in the recitation-room, after the class is dismissed,—the writer as well as the corrector of each having signed his name thereto, before the exercises are delivered over to the teacher for examination. The one who makes the most corrections should be credited accordingly—allowing always one correction to counterbalance one error, if the scholar be so unfortunate as to have made any. Let every error (whether in spelling, or in punctuation, or in the overlooking of an error, or in any other respect) made in attempting to correct another's work, be accounted the same as a mistake in writing the exercise. A daily record should be kept of all this. At first the mistakes will be so numerous that but little can be given out and attended to. But in a few weeks, if this system is faithfully persevered in, it will be surprising to see what progress is made, and how the errors decrease in number.

One cannot, however, always have small classes. And even if he can, the following method affords a pleasing variety. Say a class of twenty-five has just been organized. The lesson has been assigned, and is supposed to have been studied. The class assemble, and are arranged alphabetically, or by lot, or according to age, as may seem best: if according to age, the youngest at the head, the next in years next, and so on to the oldest, who takes the foot. The lesson begins. It may be in single words, or in sentences. Suppose the latter. The sentences should be short, each complete in itself, as in Sargent's Speller, for example. The spelling is to be done orally. The sentence is given out distinctly, and the whole class is expected to attend, as it is not to be given out again, even though it is missed. We will suppose numbers 1, 2, 3, 4, and 5 successively spell their sentences correctly, capitalizing, punctuating, etc., as necessary. Number 6 misses. The teacher is to take no notice of it, otherwise than quietly and in a manner unobserved by the class, to put a dot with a lead-pencil opposite the name of the one who has thus missed, and in the proper column for the day, in his record-book, which should be open before him all the time as well as the book from which he dictates. Instead of giving the misspelt sentence to the next one to spell, give out another sentence, just as if no mistake had been made. This, the class should understand beforehand, is to be the case. The first one who observes the mistake, instead of spelling the sentence given to him when his turn comes, pronounces the sentence that was missed, then spells it. If correct, he passes up and takes his place above the one who missed it. If not, the next one may try it; if he misses it, the next; and so on until the work is correctly done. If it should pass the foot uncorrected, and number 1 spells it right, he "goes up" and takes his place above the one that first made the mistake. That is, if number 6 made the mistake, and it passed around uncorrected to number 1, number 1, who corrects it, takes his place just above number 6. He has virtually passed from one below the foot up to within four of the head again. For passing the head, he is credited one. Should he pass the head again before the recitation is over, he is credited with two "heads." Thus several scholars may pass the head during one recitation; and each therefore is credited accordingly. At the close of the exercise the class are numbered, their numbers recorded, and when they next come together, they take their places in the order in which they stand at the close of to-day's recitation. If any are absent for a day or more, when they appear in the class again they take their place at the foot, relatively to each other in the order in which they were when they were present last, which is readily decided by a reference to the record-book. To-morrow's recitation, if possible, should begin at that point in the class at which to-day's left off. In this way, all are dealt by

equally, and the one who passes the head the most times during the quarter or the session, if not positively the best speller, is the most attentive and most deserving. At the end of the quarter or the session, or oftener if desirable, the record, so far as the number of heads gained is concerned, may be read off; and once or twice a year it does very well to make something of a present to the best one or two in the class. Grown people work better, as a general thing, if they expect to be well rewarded for their labor; and children do better, too, if something tangible in the form of a prize is held out for their attainment.

It will be found that the giving out of a word or sentence but once is an excellent exercise for gaining the attention as well as strengthening the memory of the pupils. Occasionally I have found it beneficial to interrupt the spelling exercise by asking reasons for certain things; as, why *America*, in a sentence like "Columbus discovered America," should begin with a capital; why *web-footed* should be spelt with a hyphen; or *can't*, or *'tis*, or *John's*, with an apostrophe; why the *i* should follow, and not precede, the *s* in *business*; why *queen* should begin with a capital in such a connection as "We were introduced to Queen Victoria," and not in such as "We were introduced to the queen;" etc., etc. If *fuchsia*, or *sibyl*, or some similar word occurs, explain its etymology, especially if the class is composed of more advanced pupils. Questions and explanations like these tend to fix the orthography of certain words, or of words under certain conditions, indelibly upon the mind, if they do not really for the first time call the scholar's attention to it.

When any of the class display inattention or a lack of proper study, and in consequence make a certain number of mistakes during the recitation, say three, or even more according to circumstances, an excellent penalty is to require them to copy *litteratim et punctuatim* a page of foolscap at the close of the day from their Reader.

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### INTELLECTUAL DISCIPLINE.

THE rarity of men of whom we can justly say that their minds are in perfectly good trim, is a proof of the inadequateness of the common ideals of the perfection which the mind may fairly be expected to reach. Nobody appears to think that there is anything strange in the fact of a man, with the ordinary pretensions to be called educated, still avowedly taking no interest in some four or five of the chief subjects on which intelligence is exercised, and which have brought really ponderable contributions to the common stock. Apart from the mournful classification

of men who only know literature, and men who only know physical science, each despising the knowledge of the other, there are all varieties and shades among the ignorances of learned men. He who is excellent at Greek plays or Elizabethan texts or old manuscripts, thinks it no ill to be without a taste for music or scenery. He who loves speculative writers on ethics, economics, and metaphysics, is content to be deaf to the charms of verse. A third, devoted to physical investigation, has a weak contempt for the movements of practical politics. And so on, through all the directions that the curiosity and intelligence of men may take, it is thought no shame that, provided anybody diligently and fruitfully seeks knowledge in one field, he is welcome to remain in as profound darkness as he pleases as to all the rest. Indeed, this is not all; for to take an understanding interest in a great many things, is the most certain means of winning for yourself the odious reputation of being very accomplished but very superficial. If the people who think with complacency on their ignorance and apathy about so many subjects, were asked to propound in due formula their theory of the aims and possibilities of mental cultivation, they would assuredly be thrown into a deep quandary. For there is only one formula possible, provided you mean to defend it rationally. Apart from, and besides the trade by which a man earns his right to live, he is by so much the weaker, the less intelligent, and the less happy—in the best sense of happiness—as there is any form in which human energy has manifested itself unknown or unappreciated or uncared for by him. Sound mental discipline, therefore, has two aims—first, to keep men from being merely specialists; and secondly to keep them from a futile dispersion of their time and faculties over the whole field without a healthy concentration in any one part.

At the present day, the former of these objects is much more worthy of being constantly called to mind than the latter. We suffer more from the dispersiveness of studies pursued in isolation by numbers of men than from the dispersiveness of faculties in any one man or set of men. Everybody would admit in theory, if hard pressed, that in some Utopian state, with wholly changed conditions of existence, with forty-eight hours in every day for example, and unwearying brain-power instead of that very easily wearied power which is all that we have, then the dispersiveness and specialization of knowledge might well be superseded by a system in which everybody should know everything. But meanwhile they ask, and where is the brain to take in all knowledge? Of course, in Milton's day, a man might fairly hope to know everything that was then capable of being known. There was no science to speak of. Literature was very scanty, if it was also very good. Speculation was almost entirely in the theological stage, and so the premises, at any rate, were few and simple, and easily mastered. But now, as all the world perceives, some-

times exulting and sometimes lamenting, the sum of knowable things is more than one can know. The most voracious powers of acquisition are feebleness itself in the presence of the daily increasing mass of facts to be acquired. But this, after all, only shows that mere acquisition of facts is not the supreme object which a man, wisely seeking to discipline his powers, would choose to pursue. It is possible, however, to master the general ideas of the various subjects, as well as the special ideas and verified conclusions of one's own particular subject. It is not at all out of the reach of even a busy man—provided he has had the right tastes for things properly implanted and tended in his early years—to get a satisfactory glimpse of, and the power of taking a satisfactory interest in the general tendencies of discovery and effort in all their manifestations. It is perfectly possible to form what in legal matters would be called a digest of the leading principles and present problems, the usual methods and the line of progress belonging to each given subject of investigation or performance, and to seek for some common summary of them all. To evolve a philosophic doctrine which shall comprehend all human knowledge is a task for a master. Some affirm that this has been already achieved, while others confidently deny it. Whether or not, minds vigorously and correctly trained to throw aside superfluous and accidental parts of knowledge, and to grasp what is central, vital, and most comprehensive, have ample power of making for themselves a conspectus of the paths in which the human intelligence has travelled, as well as of the more notable monuments which it has raised by the roadside. Hence the value of such a book, for example, as Whewell's "*History of the Inductive Sciences*." You may not be a master of all the problems of modern chemistry, nor fathom all the minuter laws of astronomy; but you may very well acquire a thoroughly luminous conception of the larger steps which have been taken in methods and laws; of the kind of intellectual effort which has brought us from the fantastic conjectures of them of old times down to the embracing certainties of modern science; of the progressive growth and improvement of men's ideas of evidence and proof; and of the influence which this improvement in the scientific region has had in modifying the mental states of society in regions that are not scientific yet, whatever they may become in time. To follow this long record with intelligence, with a sense of the connection and interdependence subsisting in the midst of it all, if not with an exact and exhaustive discernment, is one of the wholesomest elements of intellectual discipline that we can imagine. It imparts consistency and breadth to a man's acquaintance with the detailed facts of any one science, and gives him, moreover, a firm and wide basis for the further acquisition either of general principles or special sets of facts. And it is a practice as even Mr. Lowe himself or any other deliberate vulgarizer of education could



desire; for there is nothing so important in understanding men and social movements, and in dealing with them or controlling them, as a correct and instructed appreciation of the slow pace at which wrong methods of examining and interpreting facts give way before right methods. In literature, again, such a book as "*Hallam's History*," or "*Sismondi's*," may well serve for models of the kind of discipline which anybody who takes pains with himself should strive after. Such books indicate the system on which he should read—the industry, that is, with which he should undertake to master, not an author only here and there, but companies of authors, with a view to seizing the leading ideas and habits of thought and forms of expression which mark the succeeding ages of a civilized and literary society and distinguish one from another. Here, and in all cases, to be systematic, to seek high and far-reaching points of view, is the secret of an effective discipline—the end of it being to create and develop an active and appreciative sympathy with all the forms in which the best minds have expressed themselves.

This sympathy ought not to stop superciliously short, in obedience to a narrow fastidiousness or stupidity, excluding novels, for instance, or music, or the drama, or anything else which accident or deliberate mutilation of mind may have disposed a man not to hold worthy of a place among serious interests. The beginning of knowledge is a respect for all the forms in which men of the highest human quality have ever worked, and into which they have ever thrown themselves. One has preferences naturally, and respect for varieties in the expression of mental energy does not preclude us from measuring them among one another. Even if we feel a repugnance which no effort can overcome to some particular kind of work, it is worth while to force one's self to recognize whatever sincerity of feeling and whatever force and directness of execution it may present. Of course, if it has neither one nor other of these, it is beyond the reach of aversion or liking, or any other positive emotion. We look at it and pass on. But if a work, whether in form, in color, in sound, or articulate word, be sincere and forcible, then no personal repulsion should distort one's admission of its good quality, and its right to a place before the world; any more than the mere fact of a man's being epigrammatic, keen, or a little stern, should prevent us from recognizing whatever energy, or disinterestedness, or essential humanity, or other fine quality he might have at the back of his unlikable manner. In intellectual as in moral discipline, there is nothing more important than to clear the mind of passionate prejudice: and this seems simple enough; yet we all know men of one author, one painter, one composer, one poet, at the feet of whose image they are ever immolating all other poets, painters, and composers. No sort of bigotry and conceit is more truly offensive than this. To crush it in one's self is a main point

in intellectual discipline, as to expose its disgusting silliness in other people is a very important point in social discipline. In persons of a certain character, this intellectual exclusiveness has its root in a crooked kind of vanity. They are compelled by all the rules and necessities of intellectual regimen to practise considerable abstinence. As we said at first, there is much which they cannot read and apprehend and assimilate. Yet they are unwilling to believe that they have not a judgment worth hearing about all things; and hence comes wrong and most presumptuous disparagement of whatever happens to fall outside of their own plot of ground. Many people would admit in theory that they cannot fathom or even touch all subjects; yet few admit practically, that there are many subjects on which they cannot even have an opinion. A man will candidly confess that he is not a competent critic of embryology, physiology, or biology in any of its forms; yet we must not be surprised to hear him condemn Mr. Darwin offhand, and scout the writer's conclusions as if they were the utterances of a schoolboy. This is a common trick in many regions of thought—to concede your ignorance in general, and then to maintain your knowledge in particular.—*Saturday Review*.

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### THE BODY OF THOUGHT.

**S**PEECH has been defined as the body of thought. By some philosophers, indeed, it has been questioned whether it is possible for the mind to carry on any operation, or at least any series of connected operations, without some species of language: that we think in words, and that without words we cannot meditate or reason. Hence, if one should resolve, for instance, to go to town the following day, he repeats to himself inaudibly, and unconsciously it may be, in so many words, "I will go to town to-morrow." Archbishop Whately, in his *Elements of Logic*, says: "A deaf mute, before he has been taught a language, either the finger-language or reading, cannot carry on a train of reasoning, any more than a brute. He differs indeed from a brute in possessing the mental capability of employing language; but he can no more make use of that capability, till he is in possession of some system of arbitrary general signs, than a person born blind from cataract can make use of his capacity of seeing, till the cataract is removed."

In a foot-note, he fortifies this somewhat singular position by the case of Laura Bridgman, who, from her birth, has been deaf, dumb, and blind. He says: "She has, however, been taught the finger-language, and even to read what is printed in raised characters, and also to write.

"The remarkable circumstance in reference to the present subject," he continues, "is, that when she is alone, *her fingers are generally observed to be moving*, though the signs are so slight and imperfect that others cannot make out what she is thinking of. But if they inquire of her, she will tell them.

"It seems that, having once learned the use of *signs*, she finds the necessity of them as an *instrument of thought*, when thinking of anything beyond mere individual objects of sense.

"And doubtless every one else does the same; though in *our* case no one can, as in the case of Laura Bridgman, *see* the operation; nor, in general, can it be heard; though some few persons have a habit of occasionally talking audibly to themselves, or as it is called, 'thinking aloud.' But the signs we commonly use in silent reflection are merely mental conceptions, usually, of uttered words; and these doubtless are such as could be hardly at all understood by another, even if uttered audibly. For we usually think in a kind of *short-hand*, if one may use the expression, like the notes one sometimes takes down on paper, to help the memory, which consists of a word or two—or even a letter—to suggest a whole sentence; so that such notes would be unintelligible to any one else.

"It has been observed also that this girl, when asleep, and doubtless dreaming, has her fingers frequently in motion; being in fact talking in her sleep."

In the case which we have supposed, it would follow, according to the archbishop, that a person who was totally unacquainted with any description of language, or "system of arbitrary general signs" whatever, could not possibly resolve to go to town, nor do any other act not springing out of mere instinct. Hence, an untaught deaf mute can perform no act from a higher motive or impulse than a brute under similar circumstances.

As to the case of Miss Bridgman, from the fact that "when she is alone, her fingers are generally observed to be moving," it does not seem to us to follow that this is a necessary means to her carrying on an operation of the mind. Nor from the fact that when asleep, and doubtless dreaming, she "has her fingers frequently in motion," though she is undoubtedly talking in her sleep, does it seem to us that it must necessarily follow that she could not dream without the assistance of these arbitrary signs.

Thought, and its exponent language, are possessed to a certain degree by the lower animals. Some of the actions performed by these creatures evince an ability to reason to a considerable extent. They are such as cannot be supposed to spring out of any effort of mere blind instinct. One of the most striking instances of this kind, is the well-known incident related

of an elephant on exhibition in London. Spectators frequently amused themselves by throwing small coins to the animal, to see him pick them up with his trunk. On one occasion, a sixpence was thrown, which happened to roll beyond the elephant's reach, and lay near the wall of the room. The animal made several ineffectual attempts to reach it, and then stood some seconds in apparent reflection. He then raised his trunk, and directing it a little above the coin, he blew with great violence against the wall. The current of air, turned from its course by the opposition of the wall, acted under the sixpence, as the elephant evidently supposed it would, and it was curious to observe the coin travelling toward the animal until it came near enough, when he picked it up.

Now, in this case, there had doubtless been a train of reasoning going on in the mind of the animal. It was reasoning, too, of a high order—it implied a considerable knowledge of pneumatics—of cause and effect, and the result was such as an enlightened understanding alone could have foreseen. Many other instances are related of this animal, showing this and other qualities of the mind approaching in a wonderful degree to the higher powers of the human intellect, and furnishing a practical refutation of the lines of Pope :

"How instinct varies in the grovelling swine,  
Compared, half-reasoning elephant, with thine!  
"Twixt that and reason, what a nice barrier!  
Forever separate, yet forever near!"

Similar qualities, though perhaps not to the same extent, have been observed in other of the lower animals.

Now, in the case alluded to, though the elephant undoubtedly carried on a perfect train of reasoning, yet we cannot believe that the language of that animal is at all extensive. We cannot believe that he had words, or any species of "arbitrary general signs" for many of the things and conditions he was called upon to consider. That is, that he had any names or signs whatever to stand for *angles*, *currents*, *reaction*, and many other things that would have suggested themselves to the mind of an intelligent man under similar circumstances. Yet the train of reasoning on the part of the animal seems to have been the same as that which would have passed through the mind of the man. From these considerations, we are led to the opinion that thought and reasoning *can* be carried on in the mind of both man and beast, independent of any "arbitrary general signs" whatever.

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To prepare us for complete living, is the function which Education has to discharge ; and the only rational mode of judging of an educational course is to judge in what degree it discharges such function.—*Spencer.*

## THE JOINT EDUCATION OF THE SEXES.

THE policy of educating young men and young women together is getting to be the chief educational question of the day. It is a question too that will not wait long for a settlement : for like all innovations that claim to be reforms, the "mixed" system, as it is improperly called, is aggressive, and will not be ignored.

As the objections commonly made to the system have rather a negative than a positive foundation, being mainly based on an indefinable dread of something terrible to follow upon the association of young people at a time when they are in danger of thinking more of each other than of science or letters, the testimony of those who know whereof they speak in relation to the matter, is at once instructive and convincing. Of such a character is the following in favor of the joint education of young men and young women, copied from a little educational paper published in Oregon, *The Forest Grove Monthly*. It is attributed to the pen of the President of Pacific University, S. H. Marsh, D. D. :

"We believe that it is best for both sexes that they should be associated together. There is no sacrifice of anything valuable. The courses of study may be even more complete than in two distinct institutions, owing to the gain in resources from combining in one the work of two. The young ladies are engaged in as purely feminine pursuits as if enclosed within the walls of a nunnery, or a fashionable boarding-school or seminary. The young men are trained to as manly an exercise of intellect as if secluded where female eyes might never look, and feminine grace might never enter ; while either sex receives a benign and divinely ordained influence from the very presence of the other. There cannot, indeed, be a truly feminine character developed when the girls are reared in seclusion. It has a sickly, unnatural hue ; and so young men grow up with one-sided, unbalanced characters, when educated alone. Young men and young women come out of their respective schools, not merely ignorant of the world, but uneducated, or wrongly educated, from the absence of influences that are especially adapted during those years to subdue extravagances and harmonize in their growth the various powers of the soul. They are never mere intellects, least of all are they especially intellectual in youth. They must be educated in view of their natures, and not in despite of it. You cannot attempt to educate mind at the expense of the other elements of the soul's being, without a contempt for humanity, to say nothing of God's laws. Let not any one form any extreme conclusions from what we say. We do not wish any undue cultivation of sentiment, or of the emotional ; we only ask that the growth and education (which is only a cultivation of growth,) shall be, as far as

practicable, under the normal conditions of well-being. We only wish that the tree which must be ultimately transferred to the common soil of this world, should not be for years under such special cultivation with reference to a particular form or particular qualities, as may injure its native vigor as a tree. Rather, we would have all its culture tend to increase this latter, confident that so it will best serve its day either for shade or fruit.

"Some may sneer at this, having in mind some imaginary College or Female Seminary, where high-toned, intellectual and docile young people quietly submit to be trimmed and shaped after the set pattern—entirely a fancy picture by the way!—they may object to coming down, and to popularizing, and think that this is a sacrifice of something valuable in the former college arrangement, and unequal to the nunnery system of Seminaries. We know from experience the force of prejudice in this matter, and can excuse those who judge and sneer under its influence. Such prejudice will vanish under reflection and a little experience, provided there is any right notion of that which education aims at. If there were need for a class of *thinkers* to perform a certain function in society—to be its brain, and do the thinking as a profession, it might be best to select the choice ones and immure them in College. Cut off from society they would be the forlorn hope of science. This opinion has prevailed, but it is a mistake. We need *thinking men*, not mere thinkers; *cultivated women*, not a refined nondescript called an accomplished lady. If we would have these, regard must be had in education to all the conditions of growth. Now without going into a psychological analysis, to show what the needful influence in education must be, it seems to us plain that the mutual influence of the sexes on each other must be good, and that many of the evils incident to their separate education are avoided by the method that we have adopted. "Young men are less mannish and more manly; young ladies become more like young women. All feel an elevating, purifying, strengthening influence. There is nothing to interfere with, but much to favor, the utmost refinement of feminine character, and to develop the highest style of manly scholarship.

"The association is slight, it is true, but it imparts the influence that we all feel in the presence of those whom we respect and whose esteem we value. Young men and young women do respect each other. The judgment by each of the other, is a most powerful stimulant in the formation of character. It is right that it should be so. Under its influence each tries to become more deserving of respect. The woman becomes more really feminine, the man more really noble.

"We are certain, from our own experience, that this association of the young people in instruction gives a tone to all the exercises. It stirs a

spirit of dignity and devotion. It purifies the whole atmosphere of a college.

"We hope that it will result, in this case, in the fairest specimens of cultivated womanhood, of gentle, yet heroic men, prepared and willing to go forth to the labors and trials of work for redeemed humanity.

"We have not considered any of the practical difficulties of systematizing the work, or of establishing the regimen of an institution of this kind for both sexes. It is plain that the administration will be different from that employed under other circumstances—in some respects very much easier, and in some requiring more rigid discipline and more definite rules."

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### IS PRESIDENTIAL IMPROPER?

IN the November number of the *Galaxy*, Mr. White contends that *presidential* is one of the "words that are not words." He says, "Carelessness or ignorance has saddled it with an *i*, which is upon the wrong horse. . . . We might as well say *parential*, *monumential*, and *governmential* as *presidential*. The proper form is *presidential*. *Presidential campaign* is a blatant Americanism for *presidential canvass*."

The use of *campaign* for *canvass* may possibly be an Americanism; but *presidential* is not. Neither is it on an equal footing with "*parential*, *monumential*, and *governmential*,"—forms which nobody ever used or probably ever heard of before. As for *presidential*, it is simply a purist's creature, unworthy of notice. *Presidential* stands in the same category with our important mathematical terms *exponential*, *tangential*, and *equilangential*, with *precedential* and *unprecedented*, and with the somewhat rare word *torrential*, which the editors of the recent edition of Webster's Dictionary have introduced into that work. Nor should our every-day term *potential*—"Potential mode"—be overlooked. It is true, we have no noun *potent*, corresponding to the nouns *president*, *precedent*, *exponent*, *tangent*, and *torrent*; but it is also true that we have no noun *potence*, corresponding to *consequence*, from which to derive *potential* as we do *consequential*. Was it through "carelessness or ignorance" that these words were overlooked in Mr. W.'s attack on *presidential*? Or are these also words that are not words? Mr. W.'s objection to *presidential* is really more nice than wise. We need not caution any one against adopting his mode of spelling this word; but we would advise young writers not to imitate the inelegance of his language, when he speaks of a word as being "saddled with an *i*, which is upon the wrong horse." This sounds more like bar-room slang than the language of an essay on words and their uses.



DECEMBER, 1868.

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COLLEGES AND SECTARIANISM.

WITHOUT proposing to discuss the question whether the interests of a sect or those of a college are properly to be the more looked after when the two interests are associated, we assert the belief that sect preservation, in case of such association, militates against the interests of the college.

A college professes to secure, not a training in dogmatic religion, but an education of the mind. And since mind is best educated by being brought into contact with the greatest variety of intellectual influences, it follows that sectarianism, which jealously guards against the introduction of influences that may prove hostile to itself, must necessarily prevent, where it takes precedence in a college, that fulness and completeness of education which is to be secured where sectarianism has not the preference.

It is a noticeable fact that colleges, wherein the most enlarging influence is brought to bear on the minds of the students, themselves enlarge as do not sectarian colleges. Age, no doubt, has much to do with the growth of a college; but not all. Princeton, for example, is nearly as old as Harvard or Yale; but the growth of Princeton has not been in like proportion with its years, as has been that of the other two, while the younger and freer University of Michigan has well-nigh outstripped the three.

Several considerations enter here; among them these. A free college, Harvard for instance, representing not a sect but a people, receives the people's support. Princeton, on the other hand, represents not the people, but Presbyterianism. The interests of the Church take precedence of the interests of the college, and so the college looks elsewhere for support than to the people at large. Besides, while a sectarian col-

lege draws endowments generally from one class of the people, an unsectarian college receives endowments from all classes.

A wealthy man who has the interests of a sect at heart, endows not a college, but a theological seminary, a church, or a mission. Those who have the interests of education at heart, are to be found among all classes; and while the money of such persons is likely to go to colleges, the greater part of it will go to colleges that regard the interests of education as paramount to those of a sect. A college, furthermore, that receives the largest endowments, and hence has the greatest means for furthering its purposes, attracts the most students. A sectarian college shuts itself in from the people, as China, until lately, has shut herself in from the rest of the world. And this shutting in policy in a college, shuts in from the exercise of an extensive influence those men of genius and learning who are to be found among the members of its faculty. The fame of a sectarian college itself, indeed, as well as its usefulness, is restricted by sectarianism.

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#### THE BOMBASTIC IN SCHOOL DECLAMATION.

THE term declamation as applied to the school exercise of reciting from the rostrum a speech that has been committed to memory, is hardly a satisfactory one. It is not sufficiently definite; and, besides, in its prevailing meaning, it conveys the idea of a sort of speaking which taste pronounces bombastic.

If good sense were a law recognized and observed universally, the term could indeed have, in the application to which we refer, but one meaning; but as things are, the word has now a position similar to that of a loose word in theology or in law. It may mean oratory and it may mean epithetic sound and fury; and under the latter signification, there has been manifested the absence of good sense in the introduction into schoolboy literature, as oratorical models, of large numbers of original and selected speeches of the bombastic sort.

In some schools, among which are to be found colleges, the bombastic style of declamation, under the direction of teachers devoted to the style, reigns to the disgust of nature. The pupils are trained to it. In it they find their models. The models come to be the idols of the

learners ; and the rough hand of the world at last proves to be the final and only true teacher.

One of the most striking specimens of the vicious sort of declamation is to be found in *Our Young Folks* for November. The declamation is entitled  *Icilius*. It seems to have been written for the purpose of supplying the demand among the young folks for the monstrous. An average declaimer might have his rant worked up to its highest pitch by essaying this piece. So sure are the publishers of the magazine that the declamation is fitted to supply a large and eager demand, that they append to it a note prohibiting its republication.

Our school and young folks' literature should be purified of bombast ; and only pure models of declamation should be presented before the easily mouldable minds of the young. And we can conceive of no easier method of thwarting the design of purification than that of retaining as teachers of declamation such as find in bombast their model, and are ever creating a new demand by training their pupils in bombastic declamation. So long as bombast is marketable it will be in the market.

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## CORRESPONDENCE.

### NEW YORK STATE TEACHERS' ASSOCIATION.

**M**R. EDITOR.—Every educational man and woman in the State must be grateful to an ex-president, who, in the last Monthly, attempts to bring back the old ship of the State Teachers' Association to its proper moorings. Especially when they are assured (nothing new indeed) that this effort, upon the part of this teacher, is the irresistible outgushing of genuine philanthropy. Just as the old craft was about to take its last fatal plunge, it *was* a friendly breath which brushed away the clouds and revealed the fearful danger. We trust the tocsin of danger thus fearlessly and faithfully sounded, may be properly heeded : and is it not a matter of gratitude, that some influence has entered into the near presence of the genuine and "practical" teacher, and brought from him this note of alarm ? We trust the good work may go on until many other "practical" teachers shall come forth to the rescue. But we would not have this ex-president deceived. Let him not, for one moment, charge the election of the present president to the powerful influence of his friendly voice of warning ;—far otherwise. Had the last association known that the note of warning given by the ex-president had any possible reference to the pending election, the present president would have received a much smaller majority. The truth is, that three

weeks before the meeting alluded to, this same gentleman who, with so much vehemence, raises the cry of corruption, wrote to the retiring president, urging the claims of Mr. Reid to the office he now holds. His name was presented to the committee, by the retiring president, without inquiring whether Mr. Reid had ever been engaged in any other business, or whether now he was engaged in the school-room as a "practical" teacher. We remember him as the earnest and intelligent teacher, whose interest was with the teachers, and as such he was supported.

The readers of the MONTHLY will excuse the seeming personality of this letter. It will be impossible to set the ex-president, whose *critique* we are reviewing, in a proper light, in a general article on the Teachers' Association. Mr. Valentine feels most intensely upon this subject. He says, "Silence would be treason, and acquiescence rank cowardice." Under such powerful emotions, he denominates the State Teachers' Association a "great educational fair, mainly supported and controlled by book-agents, school-officers, and amateurs; that actual working teachers had little to say and less to do in the management of its affairs, and that it was a palpable misnomer to call it a Teachers' Association, while it was not such in any proper sense."

Now this sweeping assertion must be reviewed a little, and the character of the association vindicated. How is it about the election of officers at Auburn in 1867? The president elected there was a teacher of twenty years' experience, and came fresh from the class-room to the association. And further, he had not failed, but once in twelve years, to be present at the annual gathering of the teachers. He had no knowledge of any support from any "book-agent" or any other man or class of men. He was nominated and elected without any "wire-pulling," or any word or wish of his. He was elected as a teacher, and as such went forth as the servant of the best interests of the Teachers' Association. For about three months after his election to office, he was engaged in giving instruction to the teachers in different parts of the State.

In every plan for the meeting at Owego, teachers were first consulted, and the best interests of the teachers and of popular education were regarded. It is a little singular that this bilious ex-president finds no fault in regard to what was *done* at the Association, but simply calls in question the appointment of committees and officers. Did not the committee on nomination at Owego do their duty well? Did they not consult the interests of the Association? They were all, or nearly all, teachers of from ten to twenty years' experience, and such gentlemen as were found present from the different judicial districts from which the committee were to be appointed. But the question in regard to what a teacher is, came to be the important one. Is it to be supposed that they only are teachers who have a "regular charge" the year round? Are they the only soldiers who are called into the battle? Can there be no reserves? Can there be no resting?

The "impeachment" spoken of by the ex-president, the charge of attempting to "deceive the very elect," and various other insinuations contained in his article, he will see, upon review, savor strongly of a want of charity, to say the least. We see no demand for the "black and white proof" spoken of. That teachers may see just how imminent the danger is, let us notice the other officers of the Teachers' Association, the management of which is so earnestly assailed.

First Vice-Pres. C. R. Abbot, of Kingston Corners, directly in the list which Mr. Valentine heads with "Superintendent" Bulkley, Kiddle, and Smith. (How much freer they must breathe for this liberty given them!)

Second Vice-Pres. A. J. Lang, of Waverly, is principal of one of the most prosperous academies in the State; a position he has held for eleven years. He is likewise School Com'r, and therefore in near and earnest sympathy with the public schools of the State; he is a "practical" teacher. Third Vice-Pres. J. Winslow, of Watertown, is a teacher of large experience, and in the actual practice of that noble "art." He is a clergyman also. My friend will not pretend that this invalidates his claim.

Rec. Sec. M. M. Merrell has taught many years with great earnestness and success, and came fresh from Watertown High School to the Association. Dr. Cruikshank, the Cor. Sec., is well and favorably known, not only in his own State, but in many others. We leave it for educational men to say whether *his* claim is illegitimate.

M. P. Cavert, of Albany, the Treas., has spent his whole life in teaching; and although in the office of the Department at Albany, he comes directly under the special classification of teachers given by the discriminating critic.

Well, how does the list of officers appear? Does the interest of the Association seem endangered in such hands?

There are no truer friends to the teachers in the State than those named above.

Let us glance a moment at the list of names on the programme of exercises at Owego:

M. P. Cavert, State Department, Albany; A. J. Lang, Prin. Waverly Academy; Wm. L. French, Prin. Pub. Sch. No IV., Buffalo; Oliver Morehouse, Prin. Albion Academy; Adolph Werner, Teacher, New York City; Prof. T. S. Griswold, Prin. Union School, Forrestville; Jacob Wilson, Prin. Newark Academy; E. A. Sheldon, Prin. Normal Sch., Oswego; Maj. G. H. Stowitts, Prin. No. 8, Buffalo; Prof. S. G. Love, Prin. Union Sch., Jamestown; Prof. Ira Sayles, Prin. Rushford Union School; Miss Ellen Seaver, and Miss Emily A. Rice, Oswego Normal School. (Many teachers were "invited" who would not accept, or who were incompetent for the work.) These are some of the "outsiders" who figured on the programme at Owego, and which urged the ex-president on in his philanthropic efforts to rescue the interests of the New York State Teachers' Association. The teachers will be rejoiced to learn that while Pres. Reid *was once* a book-agent, he is now a genuine *bona fide* teacher. It might have been more satisfactory to those who sympathize with Mr. Valentine, if he had gone into the details of Pres. Reid's history. They will very naturally ask: Is he thoroughly reformed, and has he still "no entangling alliances?" The endorsement of his honesty, and the very sly insinuation of *dishonesty*, contained in the following remarks, are alike uncalled for, and damaging to the ex-president's efforts: "He (Pres. Reid) is too honest a man and too honorable a gentleman to resort to any subterfuge!" That "subterfuge," my dear sir, is an unfortunate word.

We leave readers to judge of the truthfulness of the following: "Of the remaining officers, one, and possibly two are teachers. But this is a great improvement upon previous years." Nothing can be wider from

the truth. When the entire report of the meeting of the teachers at Owego is published, we think no educator will fail to see its complete consistency with the legitimate work of a Teachers' Association.

Bro. Valentine means well, but he is growing slightly cynical. To avoid "firebrands," we would suggest to Pres. Reid, that in his preparation for the exercises next year, he propound to candidates the following questions :

1st. Are you a *practical* teacher according to the legitimate interpretation?

2d. Have you ever been a "book-agent;" if so, are you ready to renounce the extreme error of your ways?

3d. Have you ever been seen alone in company with a "book-agent?"

4th. Are you a school-officer? Have you ever run for any school office? Did you ever aspire to be School Commissioner?

5th. Did you ever engage in the insurance business?

6th. Did you ever receive a dollar from any source, other than your regular wages for teaching?

7th. Are you perfectly satisfied with your pay?

8th. Have you any relative or friend who is implicated in the above "entangling alliances?"

Now, my dear Mr. President, if you will just take this item of seasonable advice, and press the above questions, with any others you may think of, you may avoid "firebrands."

The other little questions in regard to real fitness of heart and intellect are of small importance, and can come in afterward.

The compliment paid to "book-agents" is indeed refreshing.

The ex-president will even allow them to sit in the audience with teachers, if they will first examine their pockets to see if there are no incendiary documents therein.

The last division of Bro. V's *critique* is addressed to *bona fide* teachers, and is a most touching exhortation. How encouraging are his words—"You do not know your own strength until you try it. You have at least no axes to grind (you don't use such naughty weapons, *interloped*), and men will respect you for the purity of your intentions!" We trust the teachers will arise in their strength, and come to the rescue. But when you do make an effort, let it be in the direction of educational reform and scientific advancement. Show what *you* can *do*, and not waste your strength in impugning the motives of those who do the very best they can. Be liberal and charitable, and thus show the pattern of a teacher that the world will respect.

We have no higher interest to serve than that of the teacher, in whose near presence we were born, and in whose society we hope to be permitted to live these many years. The meeting at Owego was not what its president desired in many respects, but we *know* it was arranged and conducted with the utmost "purity of intention," and we trust its record will be salutary.

Very respectfully,

J. W. BARKER.

## EDUCATIONAL INTELLIGENCE.

**C**ONNECTICUT.—The first thing that strikes one's attention in the last report of the Board of Education, is the prodigious self-esteem of the Secretary of the Board, which is most oppressively manifested in his preliminary glorification of himself and his office. If the people of Connecticut are not duly impressed with the magnitude of the prize they got when they got Mr. Northrup, it is certainly not that gentleman's fault.

The second noticeable feature of the report is the evidence which it gives of the educational *backwardness* of that State, which the geographies used to tell us—and do still, for that matter—"is distinguished for its excellent common schools." The number of children and youth between four and sixteen years of age, in the State, January, 1868, was 123,560. Of these 80,148 were reported as enrolled in the winter schools, and 73,865 in the summer schools. The average attendance was 57,117 in the winter, and 52,299 in the summer. There were besides 2,181 youths over 16 years old who attended public schools some part of the year. The State is divided into 1,590 school districts, having in all 1,645 schools with 2,066 departments. In the winter 2,177 teachers were employed, and nearly the same number in the summer. The proportion of male to female teachers was in winter as 617 to 1,560; in summer, as 139 to 2,023. A little more than half the teachers had taught in the same schools two or more terms. The average monthly wages of teachers, including board, was \$52.05 to men and \$24.91 to women; an increase of \$6.84 to the former, and \$1.77 to the latter. In the other expenditures there was proportionally a much larger increase. Forty-three new school-houses were erected during the year, at a cost of nearly \$200,000—more than double the amount expended for the same purpose the preceding year. The amount expended for repairs also shows a considerable increase. Nearly twice as much was paid for books and apparatus as during the year before. The aggregate of school expenditures shows an increase of over a quarter of a million dollars—sufficient to show that the people are not unwilling to pay for better schools than they have heretofore enjoyed.

Whether the schools are any better for their additional cost is quite another matter; we will presume that they are; nevertheless it is apparent that no very great advance has been made in the amount of work done in them. With an increase of nearly three thousand in the school population, the average attendance in the winter was less by 347 than in the corresponding season of the previous year. The attendance at the summer schools shows an increase of less than two thousand. In round numbers, forty-five thousand children of school age did not enter school during the year, while an average of about sixty-five thousand were absent from school every day. Of course some few thousands of the former number were too young to go to school, or were sent to private schools; but the ugly fact remains that the public schools are not doing half the work that they ought to do—and we fear it would not be very unjust to say that the work done is not half as good as it ought to be. A school-house of some sort is provided, and a teacher employed for every sixty persons of school age. The average attendance to a teacher last year



was but a fraction over thirty. To speak within bounds, not over two-thirds of the educational privileges provided were improved.

What is the reason? The "odious rate-bill" comes in for a large share of the blame, and justly. But that is done away with now, let us hope forever. There remains another obstacle to the success of the schools, and one not so easy to be removed. It is the character of the schools themselves. We cannot escape the conviction that the public schools—not of Connecticut merely, but of the whole country—would somehow be better attended if they were better worth going to. If the people of Connecticut or elsewhere, have in their hearts no very high opinion of the schools, their opinion is fully up to the desert of the schools. And the work of the schools will have to be very much improved before we can expect them to gather in all the children that ought to be in them. When the instruction given in the schools becomes of such a character that parents will feel that they cannot afford to have their children lose any part of it, then, and perhaps not till then, will truancy and unnecessary absences cease to be a source of complaint.

OHIO.—The ablest school report issued this year is unquestionably that of Commissioner Norris. Its discussion of the condition and requirements of the public schools of the State—the purposes of the public-school system generally, and the causes which prevent those purposes from being carried out—is worthy of being studied by every one interested in the schools, not merely of Ohio, but of any and every part of the country. It is the most thorough and intelligent criticism of the prevailing public-school economy that we have seen this year. The faults of the measures commonly adopted for the promotion of school interests, and the defects in the kind of instruction given in the schools, are unsparingly exposed and charged to their proper causes: and what is better, practical measures for the removal of these evils are freely suggested.

The statistics given are full and minute; and are probably more nearly accurate than those of any preceding year. In every particular, save in school attendance, they show unusual activity in the public-school work of the State, and an encouraging improvement on the year before. In the number reported as enrolled, however, and in the average daily attendance, there is an "apparent" falling off of upwards of twenty thousand—due, the Commissioner says, to increased accuracy of the returns. The school population of the State—all between five and twenty-one years of age—is about a million. In round numbers seven hundred thousand pupils were enrolled in the public schools, and about four hundred thousand were in daily attendance. This low average of attendance however, was evidently not due to any lack of school accommodation; for there were in the State 11,739 schools requiring constantly 13,588 teachers, or one for every sixty children entitled to school privileges. The schools were kept open on an average twenty-five and a half weeks in the rural districts, and over thirty-three weeks in the larger towns and cities. Estimating the number of school-going children at three-fourths the number of school age, there should have been an aggregate attendance equivalent in the rural districts to more than three million school months, and to over a million more in the towns and cities. The actual attendance was about three-fifths of the full amount

in the rural districts and less than four-fifths in the cities and towns. The loss to the State in consequence of non-attendance was therefore equal to over two million months of school privileges, at an actual cost of more than a million and a half of dollars. Now to prevent this enormous waste is one of the principal points considered in the report.

Besides the public schools there were in the State 647 private schools employing 857 teachers, and giving instruction to 26,450 pupils; 65 normal schools and academies with 178 teachers and 6,167 students; 43 ladies' seminaries with 305 teachers and an attendance of 4,217; and 26 colleges with 183 professors and teachers and 4,738 students.

The average monthly wages of teachers in public schools range, according to the grade of schools, from \$34.95 to men, and \$22.63 to women, in the sub-district schools; to \$87.10 to men and \$43.97 to women in the high schools: an increase of from one to eight per cent. on the salaries paid the year before. The whole amount paid to teachers was over three million dollars, an increase of more than a third of a million dollars on the previous year. The total expenditure for the schools reaches nearly five millions. Five hundred and forty-nine school-houses were erected during the year, costing nearly a million dollars. The school property of the State is reported as worth upwards of nine million dollars, an advance on the last year's valuation of nearly fourteen hundred thousand dollars. While giving due credit to the liberality of the people in increasing the revenues of the schools, the Commissioner strives to impress the fundamental truth that the mere creation of school privileges will not necessarily secure the education of the children. The tendency of local effort, he says, "is to increase school opportunities and expenditures without increasing correspondingly the efficiency of the schools. Now both common observation and the school statistics show conclusively that the pressing educational wants of the State are not more numerous, and better school-houses, longer terms of school, a greater number of school-officers and teachers, or increased expenditures to sustain these agencies, but an increased attendance of the youth of the State, and more rational methods of instruction in the schools." The failure of the schools to provide the right kind of instruction also receives a good share of attention, especially their failure to give instruction in morality, and in the principles on which our government is founded.

School reports are not as a general thing very profitable reading: but this is an exception, and one that school-officers will find worthy of study.

KANSAS.—Of the 62,838 children and youth between five and twenty-one years of age, there were enrolled in the public schools, last year, 39,439, an increase of about eight thousand in the year. Some four thousand more were in attendance at private schools, and schools of a higher grade. The total school enrolment was about 70 per cent. of the legal school population, and the average attendance about half the number enrolled. The number of teachers employed in schools of all kinds was 1,312, of whom 1,205 were engaged in the public schools. The average monthly wages of public-school teachers was, to men, \$39.44; to women, \$26.41. The whole amount paid to teachers was \$170,436, an increase of \$54,522 for the year. The female teachers exceeded in number the males by one hundred and twenty. The schools were in session, on an average, about four and a half months. The increase in the number

of schools and school-houses much more than kept pace with the gain in the number of pupils. The valuation of school properties was nearly doubled, and great activity continues to be manifested throughout the State in the erection of school-buildings. The permanent school-fund of the State invested and drawing interest, is small compared with most other Western States. The rapid settlement of the State, strangely enough, proved a disadvantage to the schools, by the settlers pre-empting lands that otherwise would have been set apart for the endowment of the schools. Nearly half a million acres also of the best lands of the State were lost to the schools by the preoccupation of Indian Reservations and Trust lands. In spite of these losses, however, the school endowment amounts to nearly two and a half million acres of land. The income of the school-fund last year was \$55,921. The entire income of the schools was \$342,271, of which \$96,796 were raised by district tax.

We are glad to see that Superintendent McVicar has the good sense to oppose and refute the opinions of his predecessor in regard to text-book uniformity.

NEVADA.—The *American Educational Monthly* has been chosen by the Department of Public Instruction as the educational journal to be subscribed for in behalf of school-officers and teachers, as provided by the school-law.

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### STATE NORMAL SCHOOLS.

IN response to frequent inquiries concerning the Normal Schools of the several States, we have compiled the following table. In consequence of the establishment of schools since the publication of the official reports for the year, and some very recent changes in presiding officers, we have been unable to make the list complete in every instance. Yet it will be found, we think, much more nearly complete than any list heretofore published.

In the three northern States that have no State Normal Schools—namely, New Hampshire, Connecticut, and Ohio—efforts are being made toward their establishment with fair prospects of success. A Normal School is also talked of in Rhode Island. Several additional Normal Schools are in process of erection in New York; and also in Wisconsin, Minnesota, and some other northern States.

In the Southern States, since the establishment of the Peabody Fund, the practice has been to add Normal Departments to institutions already in operation. In Louisiana, for instance, classes have been formed for the gratuitous instruction of teachers, in quite a number of the better sort of schools, of which one at least, the State Seminary of Learning at Alexandria, has received considerable assistance from the State. A flourishing Normal School was established last winter in New Orleans, for the especial benefit of the teachers of the city, and sustained by the liberality of the city superintendent, Wm. O. Rogers, Esq., and a number of the principal teachers in the city. As our list is intended to include only State Normal Schools, this excellent school does not appear

in it. For the same reason we have omitted the Normal School for Freedmen at Nashville, Tenn., under the charge of Mr. John Ogden; and other institutions of a similar character in different parts of the South.

## STATE NORMAL SCHOOLS.

STATE.	LOCATION.	PRINCIPAL.
MAINE.....	Farmington.....	
	Castine.....	<i>G. T. Fletcher.</i>
VERMONT.....	Randolph.....	<i>Edward Conant.</i>
	Johnson.....	<i>S. H. Pearl.</i>
	Castleton.....	<i>Miss E. O. Patch.</i>
MASSACHUSETTS.....	Framingham.....	<i>Miss A. E. Johnson.</i>
	Bridgewater.....	<i>A. G. Boyden.</i>
	Westfield.....	<i>John W. Dickinson.</i>
	Salem.....	<i>D. B. Hagar.</i>
RHODE ISLAND.....	Providence (Dept. Brown Univ.).....	<i>S. S. Green.</i>
NEW YORK.....	Albany.....	<i>Joseph Alden.</i>
	Oswego.....	<i>E. A. Sheldon.</i>
	Brockport.....	<i>J. B. M'Lean.</i>
	Fredonia.....	<i>Jos. A. Allen.</i>
	Potsdam.....	<i>John H. French.</i>
	Cortland.....	
NEW JERSEY.....	Trenton.....	<i>John S. Hart.</i>
PENNSYLVANIA.....	Millersville.....	<i>Edward Brooks.</i>
	Edinboro'.....	<i>J. A. Cooper.</i>
	Mansfield.....	<i>F. A. Allen.</i>
	Kutztown.....	<i>J. S. Ementrout.</i>
DELAWARE.....	Wilmington.....	<i>John C. Harkness.</i>
MARYLAND.....	Baltimore.....	<i>M. A. Newell.</i>
WEST VIRGINIA.....	Guyandot.....	
	West Liberty.....	
MICHIGAN.....	Ypsilanti.....	<i>D. P. Mayhew.</i>
WISCONSIN.....	Madison (Dept. St. Univ.).....	<i>J. C. Pickard.</i>
	Plattsville.....	<i>Chas. A. Allen.</i>
	Whitewater.....	<i>Oliver Arcy.</i>
	Oshkosh.....	
INDIANA.....	Bloomington (Dept. St. Univ.).....	<i>Geo. W. Hoss.</i>
	Terre Haute.....	
	Galena.....	<i>J. Wernli.</i>
ILLINOIS.....	Normal.....	<i>Rich'd Edwards.</i>
	Peoria.....	<i>S. H. White.</i>
IOWA.....	Iowa City (Dept. St. Univ.).....	<i>S. N. Fellows.</i>
MINNESOTA.....	Winona.....	<i>Wm. F. Phelps.</i>
	Mankato.....	<i>Geo. M. Gage.</i>
NEBRASKA.....	Peru.....	
KANSAS.....	Emporia.....	<i>L. B. Kellogg.</i>
MISSOURI.....	St. Louis.....	<i>Miss A. C. Brackett.</i>
	Columbia.....	
	Kirksville.....	<i>J. Baldwin.</i>
	Marionville.....	
CALIFORNIA.....	San Francisco.....	<i>Wm. T. Lucky</i>

## CURRENT PUBLICATIONS.

**M**R. STEELE has added to his Fourteen Weeks Course in Chemistry, a corresponding course in Astronomy.<sup>1</sup> It is a compact little duodecimo of about three hundred pages, pleasingly written and well adapted for the use of those pupils in the common schools who desire to obtain a reasonable knowledge of the leading facts and principles of Astronomy in a limited time. Like Mr. Steele's Course in Chemistry, this book gives occasional indications of hasty preparation; but in the main, it is accurate and up to the times. The new estimates of the solar and planetary magnitudes and distances are adopted. The nature of the Spectroscope and the results of its use in the study of the heavenly bodies are concisely stated and made clear. A large colored chart of the northern constellations is given at the front of the book; and in connection with the descriptions of the constellations, a number of small star-maps showing the appearances of the different star-groups by geometrical diagrams, unencumbered by the usual mythological figures. The work is arranged to be recited in the topical method.

An excellent text-book<sup>1</sup> of Astronomy, of a higher grade, is Part Third of the Cambridge Course of Elementary Physics. Mr. Steele's purpose is attained when he has stated the leading points of descriptive Astronomy, so that they may be readily understood by pupils untaught in physics and mathematics. Messrs. Rolfe and Gillet go further, and treat the subject more investigatively. They give not merely a description of the more striking Astronomical phenomena, but the principles which underlie the explanation of them. Their aim throughout, the authors tell us, has been to show the scholar from what facts of observation, and by what processes of reasoning, astronomers have reached their present knowledge of the structure of the universe; and the execution of the work is manifestly well suited to accomplish the end aimed at. The method of treatment agrees with that adopted in the other parts of the Course, so far as the nature of the subject will admit. The style is direct, clear, and cold. The pupils for whom the book is intended will find no difficulty in understanding what the authors say, but the manner of saying it is not such as to awaken in them any great enthusiasm. This, however, is properly the teacher's work; and in the hands of one who can inspire a class with the zeal and fervor needed to keep them wide awake and thoroughly in earnest, the book will answer its purpose well. The work is divided into three parts, the first treating the motions and distances of the heavenly bodies, with the methods of ascertaining and computing them (retaining the old estimates), the different astronomical systems that have been devised, etc., etc. The second treats of the physical feature of the heavenly bodies; especial pains having been taken to describe accurately and fully the sun and the moon, not neglecting the planets, the zodiacal light, eclipses, meteors, comets, and variable stars. The third part treats of Gravity, and the action of the heavenly bodies upon

<sup>1</sup> A Fourteen Weeks Course in Descriptive Astronomy. By J. DORMAN STEELE. New York: A. S. Barnes & Co.

<sup>2</sup> The Cambridge Course of Elementary Physics: part Third, Astronomy. By W. J. ROLFE and J. A. GILLET. Boston: Crosby & Ainsworth, 12mo, pp. 308.

one another. The laws of motion are first established and explained, the pendulum is described and its use in measuring the force of gravity; then how gravity acts between the earth and the moon, between the sun and comets, among all the heavenly bodies, and finally, upon the particles of matter. This includes an explanation of the tides, the form of the earth, the precession of the equinoxes and the perturbations of the planets. At the close a few pages are given showing how to find the weight of the heavenly bodies. The mathematics of the first and third parts should have been revised by some competent mathematician.

It will be noticed that nothing has been said of the Constellations. The authors' purpose was to publish a supplementary Hand-Book of the Stars, containing an account of the number, magnitudes, distances, motions, and groupings of the stars, their changes in brightness and color, etc.; but the call for an Astronomy without mathematics has induced them to change their plan, and to include in their second work<sup>1</sup> a concise account of the solar system, the results of the recent study of the solar spots, meteors, etc., and also of the spectrum analysis (with colored plate), and its revelations in regard to the composition of the sun and the stars. The principal constellations are described and illustrated by seventeen star-maps, reduced by photography, from the excellent charts in Argelander's *Uranometria Nova*, omitting all stars below the fourth magnitude, and adding dotted lines to assist in tracing the leading stars in each constellation. The Appendix contains an outline of the history and mythology of the constellations; an account of the calendar; various astronomical tables; and a chapter in which are explained the methods of finding the dimensions of the solar system and the weight of its members.

PROF. COOLEY's experience as a teacher of Natural Philosophy in the Normal School at Albany, has afforded him as wide a field of observation, probably, as any author has enjoyed for estimating the training which students usually bring to the study of that science. And he has made good use of this experience in the preparation of his text-book.<sup>2</sup> Avoiding triviality on the one side, and abstruseness on the other, he has given so much of the Elements of Natural Philosophy as can be mastered by average classes in the time usually given to this study; and what is given is stated plainly, concisely, and in a thoroughly systematic manner. The arrangement and development of subjects is logical, a single chain of thought binding the different branches of the science into one system of related principles. "The chapters, sections, paragraphs, and topics have been arranged with careful regard, on the one hand, to the relation of principles to each other, and on the other hand, to the best methods of conducting the exercises of the class-room." (*Preface*, p. xii.) The old theory of imponderables is discarded of course, and the doctrines of molecules and molecular motions presented instead. Throughout is recognized the spirit of the new philosophy which prevails in every department of science. Occasionally the author appears to accept and teach as fact what is perhaps only the most ap-

<sup>1</sup> Hand-Book of the Stars, for School and Home use. By W. J. ROLFE and J. A. GILLET. Boston: Crosby & Ainsworth, 12mo, pp. 224.

<sup>2</sup> A Text-Book of Natural Philosophy. By LEROY C. COOLEY, A. M. New York: Charles Scribner & Co., 12mo, pp. 315.

proved hypothesis, but rarely. Sometimes, too, as on page 53, he has followed the beaten track more closely than was necessary; but this, also, rarely. The engraved illustrations are simple and apparently sufficient. The problems illustrating the different laws and theories are likewise simple, as is proper in a work of this grade.

In the preparation of his new Reading-Book,<sup>1</sup> Mr. Watson claims to have been guided by the belief that the literature which healthy, intelligent children really like, is, in the main, the best for them; that entertaining stories, lively conversations and descriptions, are preferable in a reading-book to writings of a more didactic character; and that selections for use in teaching reading should be on the level of the minds of those who are to be taught—what they are just awake to and aiming at, rather than what is beyond their comprehension. He professes also, sympathy with boys and girls in their love of the spirited, the wonderful, the ingenuous, the beautiful, and the true, and in their contempt for affectation, puerility, and cant. And he demonstrates his feeling by bringing together the most charming collection of pieces in prose and verse that we have ever seen in a school Reader. This is strong praise we know: but the book deserves it; deserves it, we may add, in spite of the multitude of references, diacritic marks, and re-spelled words in parenthesis, by which Mr. Watson delights to mar his pages. To our mind, the pupil who cannot or will not pronounce correctly the sentence—"There was no school," will not be greatly helped by the unsightly excrescence which Mr. Watson adds to it, thus: "There was (wöz) no school." If this ugly thing appeared but once it would not be so provoking; but to find on one page "it was (wöz) only the brook;" and on the next, "the shell was (wöz) green;" and soon after, "Strong was (wöz) that will," is too much of a bad thing, especially when pairs like "said (sëd)," "been (bin)," and so on, keep them company.

In other respects, the typography of the book is good; and so are the printing, the paper, and the binding. The illustrations are unsurpassed in any school-book.

MR. LEED'S "Lectures on Ventilation"<sup>2</sup> is a course of three lectures explaining, in familiar language, the general principles of correct ventilation. The first sets forth the results of bad ventilation; refutes the popular prejudice against night air; exhibits the properties of carbonic acid, and gives some frightful statistics respecting the mortality due to the ordinary neglect of means of supplying fresh air. The second lecture treats of heat; its absorption by moist air, and the consequent atmospheric currents. The third lecture applies the principles previously elucidated to the ventilation of dwellings, public buildings, cars, etc.

The book, which is a thin octavo of sixty pages, contains numerous original illustrations, which supply the place of the apparatus and experiments of the lectures. Six skilfully colored lithographs exhibit the currents of warm and cold air in dwellings, provided with different means of ventilation.

<sup>1</sup> The Independent Fourth Reader. By J. MADISON WATSON. New York: A. S. Barnes & Co.

<sup>2</sup> Lectures on Ventilation, being a Course delivered in the Franklin Institute of Philadelphia, during the winter of 1866-67. By LEWIS W. LEEDS. New York: John Wiley & Son, 1868.



These lectures deserve to be widely read. The extensive experience of the author during the late war, in applying his system to the government hospitals, entitles his views to more than ordinary consideration.

### SCIENCE AND THE ARTS.

IN the article on the Solar Eclipse of August-18th, published in the September number of the MONTHLY, it was shown that the extraordinary interest felt by men of science in that most interesting phenomenon, was owing mainly to the fact that it would afford such a favorable opportunity for investigating the nature and composition of the solar prominences—the red flames of the eclipse—by means of the spectroscope. There were two theories in regard to these protuberances: one, that they were solar clouds filled with incandescent particles less hot and less brilliant than the photosphere, but still bright enough to produce the beautiful phenomena seen during an Eclipse; the other, that they were enormous masses of flaming gas driven off from the sun in the course of the violent action to which (as the sun-spots testify) the superficial portion of the sun's mass is subject. If the latter were true, the spectrum formed during the eclipse, when light from the photosphere alone would reach the earth, would consist only of isolated bright lines; and if these lines were found to correspond with known lines of the spectrum, the composition of the gases in combustion could be confidently pronounced upon.

All the observers sent out to the region of totality, provided with apparatus for the examination of the prominence-spectrum, have reported that they got a spectrum composed of *bright lines alone*, the evidence of burning gas; and nearly all these lines are given as actually corresponding with known solar lines.

In a letter to the French Minister of Public Instruction, one of the observers, M. Janssen, says:

"Immediately after the totality, two magnificent protuberances made their appearance; one of them, more than three minutes in height, shone with a splendor which is difficult to imagine. An analysis of its light showed me directly that it was formed by an immense column of incandescent gas *principally composed of hydrogen*."

In the early part of October, before information of M. Janssen's discovery had reached Europe, the well-known English observer, Mr. Norman Lockyer, mounted a spectroscope of greater power than any before used, and was speedily rewarded by the sight of a prominence-spectrum, consisting of three bright lines—one corresponding exactly to the dark line C in the red portion of the solar spectrum, which is commonly considered to be due to hydrogen; another nearly coinciding with the line F at the confines of the blue and green, which is also ascribed to hydrogen; and a third at a little distance from the conspicuous sodium lines D, but clearly distinct from them, and, curiously enough, without any corresponding line yet noted in the solar spectrum. Notwithstanding its proximity to D, it is thought to be certainly not a Sodium line.

Thus the second theory mentioned has been fully confirmed, by independent and widely separate observers, and by one of the most splendid discoverers of recent times.

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